



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,730	09/24/2003	Richard D. Bednar	7016R-000010/COB	6411
27572	7590	12/08/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			VANAMAN, FRANK BENNETT	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/669,730

Applicant(s)

BEDNAR, RICHARD D.

Examiner

Frank Vanaman

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **Status of Application**

1. Applicant's amendment, filed Sept 20, 2005, has been entered in the application. Claims 1 and 3-12 are pending.

### **Claim Rejections - 35 USC § 112**

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 5, lines 1 and 3, applicant has recited two elements called "first operable control" however from the context of the recitation, it is not clear whether these are separate elements (in view of the recitations connecting the same 'first operable control' to two different valves) or the same element.

### **Claim Rejections - 35 USC § 103**

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 and 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin (US 4,301,881) in view of Sindelar (US 4,344,287) and Porta (US 4,235,297). Griffin teaches a turf mower having a base (1) mounted on a plurality of wheels (3, 4, 5) with an operator chair (9) and interface (S1, S2, S3), an engine (15) which drives a hydraulic pump (P100) operating in only one direction, a first valve set (V7) having an inlet (V7:P) connected to the outlet of the pump, a first outlet (V7:B) and second outlet (V7:T), a first hydraulic motor (HM1) having an inlet (24) connected to the first outlet of the valve set (V7:B) and an outlet connected to a second inlet of the first valve set (V7:A); a second valve set (V207) having an inlet (V207:P) connected to the second outlet of the first valve set (V7:T), a second outlet (V207:T) connected to the input of the pump (through 19, 13 and 50-note col. 3, lines 52-57); a second hydraulic motor (HM101) having an inlet (224) connected to the first outlet (V207:B) of the second valve set, thus connecting the motors and pump in a series configuration, the second valve set having a second inlet (V207:A) to which the outlet (227) of the second motor is connected, each of valves 7 and 207 controlling flow direction and having three modes:

Art Unit: 3618

a neutral mode as shown in figure 2, and forward and reverse modes, each actuable separately by valve control elements (respective forward and reverse coils, operated by control lines 66, 73, 82, 88), a left operable control corresponding to an operation of the left valve (V7) by control lines 66, 73; an operable control corresponding to an actuation of the second valve (V207) by control lines 82, 88, the pump being a variable capacity pump (note figure 2) having a controllable capacity. The reference to Griffin fails to teach the first valve set as being a slave operated pressure compensation valve.

Sindelar teaches a very old and well known pressure and volume compensation system for a valve set, wherein a valve (21) is operated by a slave device (36) driven from a controlling device (34, 46), wherein a pressure driven volume compensation valve (74) compensates for changes in volume and pressure in the system, by differential pressure operation (see figures 2 or 3), wherein a portion of fluid being delivered to the valve may be shunted (port 91 to port 88; port 92 to port 90) around the valve in response to changes in the differential pressure across the compensator (e.g., between ports 91 and 92), maintaining the accuracy of the tracking between the controlling and slave devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the first valve set taught by Griffin with a pressure and volume compensation device such as taught by Sindelar, for the purpose of insuring accurate tracking between the actuator and valve, and to insure that changes in temperature and volume of the fluid do not adversely affect the operation of the valve set. The reference to Griffin as modified by Sindelar fails to teach the valves as being capable of regulating volume as well as flow direction. Porta teaches a valve control scheme (114, 115, 116; 118, 119, 120), wherein incremental volume flow through the valves may be controlled by a control device (12, 76). It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the non-incremental solenoid-based valve controls taught by Griffin as modified by Sindelar with an incrementally adjustable pilot valve scheme as taught by Porta for the purpose of providing a greater resolution in controlling the vehicle speed and direction.

As regards claims 6 and 11, the reference to Griffin as modified by Sindelar and Porta fails to teach the provision of a clutch between the engine and the pump. The

Art Unit: 3618

provision of a clutch to separate the engine of a vehicle from the working elements which draw power from the engine is old and well known, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a clutch to separate the pump and engine for the purpose of allowing the engine to be started with no load.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin in view of Sindelar, Porta and Yamaoka et al. (US 4,809,796, cited by applicant). The reference to Griffin as modified by Sindelar and Porta is discussed above and fails to teach the provision of a clutch between the engine and cutter blades. Yamaoka et al. teach a mower wherein an engine drives a set of cutter blades through a power take-off clutch (29) which selectively drives a pulley (30) and belt (31) which in turn drives the blades. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a power take-off clutch as taught by Yamaoka to allow selective driving of the blades of the mower of Griffin as modified by Sindelar and Porta, for the purpose of allowing the vehicle to be run without the mower blades constantly running (e.g., under conditions where cutting is not needed or not desirable).

### **Response to Comments**

6. Applicant's comments have been carefully considered. Applicant has argued that the reference to Sindelar lacks the bypass valve as claimed. The examiner disagrees. Whilst Sindelar teaches the operation of a slave valve, Sindelar additionally teaches (as was pointed out in the previous office action) a pressure and temperature compensation device (74, or 76) which operates with the slave valve and which is operated by differential pressure, and which shunts fluid from being supplied to the valve (port 91 to port 88; port 92 to port 90) in response to a change in differential pressure. Applicant appears to question the motivation upon which the combination of references is based. The motivation was set forth in the statement of rejection as follows: "it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the first valve set taught by Griffin with a pressure and volume compensation device such as

Art Unit: 3618

taught by Sindelar, for the purpose of insuring accurate tracking between the actuator and valve, and to insure that changes in temperature and volume of the fluid do not adversely affect the operation of the valve set." There is no requirement that the references teach the specific motivation employed in the combination, however in this case the motivation is clearly provided by one of at least ordinary skill in the art other than the instant inventor, namely Sindelar himself, as evidenced by the abstract at lines 7-10 (acknowledgement of the problem), lines 10-19 (brief discussion of the use of the compensating device in association with the slave valve). The "description" and "disclosure of invention" portions of Sindelar additionally support the motivation to use such a compensating device in a slave-valve environment.

### Conclusion

7. Applicant's amendment necessitated the modified ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on

Art Unit: 3618

access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

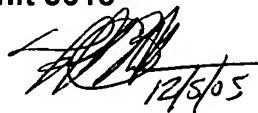
A response to this action should be mailed to:

Mail Stop \_\_\_\_\_  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450,

Or faxed to:

PTO Central Fax: 571-273-8300

**F. VANAMAN**  
**Primary Examiner**  
**Art Unit 3618**



12/5/05